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(54) Title: NOVEL BACILLUS mHKcel CELLULASE

ORF Nucleotide sequence of mHKcel cellulase gene

ATGGGTTATA CCCAAGCTAA GTGTATGGTG AAAAAACGG TCTTGTTTGG 50
TTTAATTCTC TGTTTAGGTG TGTCAATGTT TGTACCAGTT ACATCAGCTG 100
AAGATAGGGT CTCTTCGTCA CAGGTGGATA TCCAATCATTA TGTCAGAGAT 150
ATGCAACCTG GCTGGAATTT AGGTAATACA TTGTATGCGA TAGGAGATGA 200
TGAAACAGCA TGGGGAACCT CTCGTGTAAC GAGAGAATTA ATAGAAATGA 250
TTGCTGATGA AGGGTATAAA AGTATTCGTA TCCAGTCAC ATGGCAAAAT 300
CAAATGGGTG GTTCTCCAGA TTATACAATT AATGAAGATT ATATCAAGCG 350
GGTAGAGCAA GTGATAGATT GGGCGTTGGA GGAAGACTTG TATGTGATGT 400
TAAATGTGCA TCATGACTCA TGGCTGTGGA TGTATGATAT GGAACATAAC 450
TATGATGAGG TGATGGCAAG ATATACAGCT ATTTGGGAAC AATTGTCGGA 500
AAAATTCAAA AACCCTCCCT ATAAGTTGAT GTTTGAGAGT GTCAATGAGC 550
CTAGGTTTAC GCAGGAGTGG GGAGAGATTC AAGAAAATCA TCATGCTTAC 600
TTAGAAGATT TAAATAAGAC GTTCTATTAT ATTGTCAGAG AGTCAGGAGG 650
CAATAATGTG GAGCGCCCTT TAGTATTGCC TACGATAGAA ACAGCCACGT 700
CTCAGGATTT ACTAGATCGC TTGTATCAAA CAATGGAAGA CTGGGATGAC 750
CCTCATTTAA TTGCCACGGT TCATTATTAT GGCTTTTGGC CCTTTAGTGT 800
CAATATAGCA GGGTACACCC GTTTTGAACA GGAGACACAA CAAGATATTA 850
TAGACACGTT TGACCGTGT CATAACACAT TTACAGCGAA TGGGATCCCA 900
GTTGTATTAG GTGAATTTGG TTTGTTAGGC TTTGATAAAA GTACGGACGT 950
CATTCAGCAA GGTGAGAAAT TAAATTTTTC TGAGTTTCTC ATCCATCATC 1000
TCAATGAACG TGATATAACC CATATGTTAT GGGATAACGG TCAGCATTTA 1050
AAGCGAGAAA CTTATTTCATG GTATGATCAG GAATTTTCATG ACATATTAAA 1100
AGCGAGTTGG GAGGGGCGTT CTGCTACAGC TGAGTCTAAT TTCATTCATG 1150
TGAAGGACGG AGAGCCAATT AGAGATCAAC ATATACAGCT TTAATTAAAC 1200
GGAATGAGC TAACTGCCCT ACAGGCAGGG GACGAATCGC TTGTACTAGG 1250
AGAGGATTAT GAGCTAGCAG GAGAGCTATT AACGCTAAAA CGCGGCATCC 1300
TCACAAGATT AATTACCCCT GGCCAATTAG GAACGAATGC GGTCATCACA 1350
GCTCAATTTA ATTCTGGAGC AGACTGGCGT TTTCAATTAC AGAATGTGGA 1400
CGTGCCAACA GTCCGAAAATA CAGATGGCTC AATATGGCAT TTTGCGATCC 1450
CTACCCATTT TAATGGTGAT AGTCTTGCGA CGATGGAAGC TGTTTATGCA 1500
AACGGAGAAAT ATGCTGGCCC GCAAGATTGG ACGTCATTTA AAGAATTTGG 1550
CGAGGCGTTT TCCCCTAATT ACGCCACAGG GGAATTTATT ATAACAGAAG 1600
CCTTCTTTAA CGCGGTACGG GATGATGATA TCCATTTAAC ATTTTATTAT 1650
TGGAGCGGAG AGACGGTGGG ATATACATTA CGTAAAAATG GAAATTATGT 1700
TCAAGGTAGA CGGTAA 1715

(57) Abstract: The present invention provides a novel cellulase nucleic acid sequence, designated mHKcel, and the corresponding mHKcel amino acid sequence. The invention also provides expression vectors and host cells comprising a nucleic acid sequence encoding mHKcel, recombinant mHKcel proteins and methods for producing the same.

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